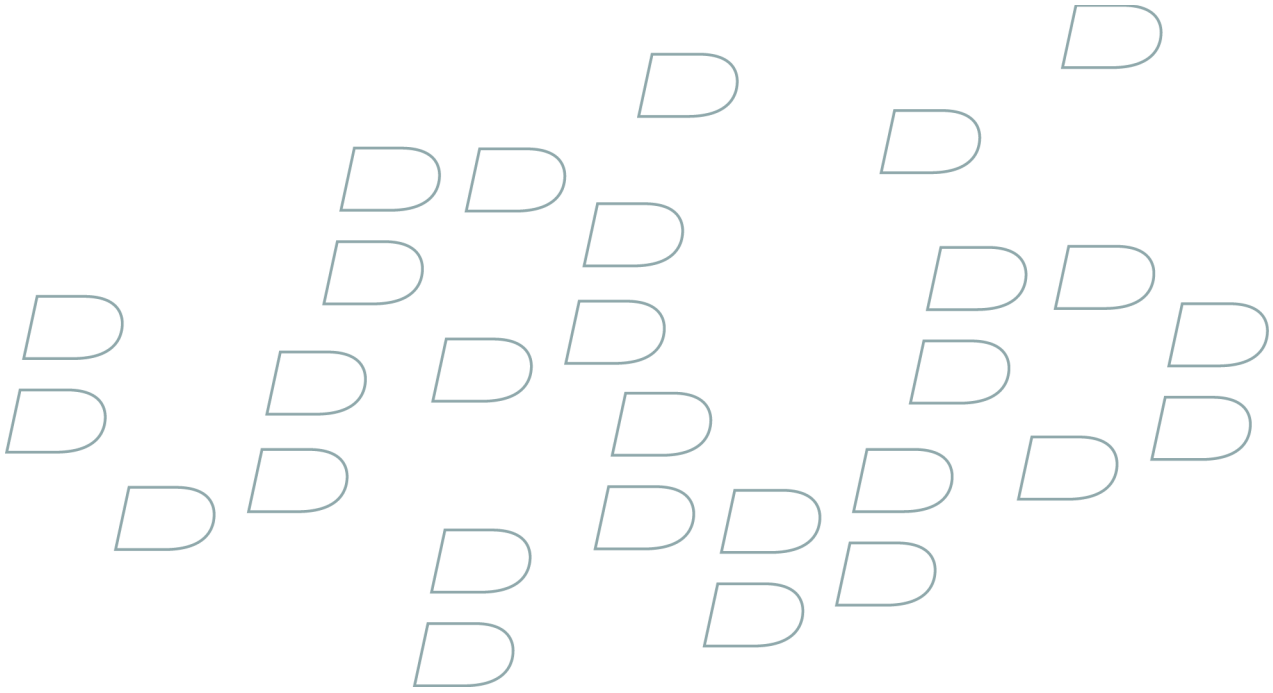

Upgrade Guide

BlackBerry Professional Software for Microsoft Exchange

Version: 4.1 | Service Pack: 4

SWD-356206-0912100551-001

Contents

1 Upgrading from the BlackBerry Professional Software to the BlackBerry Enterprise Server 5

Feature comparison for the BlackBerry Professional Software and the BlackBerry Enterprise Server 5

Host server and database upgrade scenarios 6

2 System requirements 9

System requirements: BlackBerry Enterprise Server 9

System requirements: BlackBerry Attachment Service 11

System requirements: BlackBerry Manager 12

System requirements: BlackBerry MDS Connection Service 13

System requirements: BlackBerry MDS Integration Service 14

System requirements: BlackBerry Router 14

Supported environments 15

Unsupported environments 17

3 Preparing to upgrade from the BlackBerry Professional Software to the BlackBerry Enterprise Server 19

Obtain the BlackBerry Enterprise Server software files 19

Verify and record the name of the existing host computer for the BlackBerry Professional Software 19

Verify and record the name of the administration account for the BlackBerry Professional Software 19

Verify the names of the existing BlackBerry Configuration Database and its host computer 20

Verify the existing SRP authentication information 20

Verify the existing CAL key 20

Back up the BlackBerry Professional Software registry settings 21

Back up the BlackBerry Professional Software log files 21

Back up the BlackBerry Configuration Database 21

BlackBerry Configuration Database Backup Tool parameters 23

4 Configuring a Microsoft Exchange 5.5, Microsoft Exchange 2000, or Microsoft Exchange 2003 messaging environment 25

Identify and resolve any Microsoft Exchange known issues for wireless calendar synchronization 25

5 Setting up the database connection 27

Using the existing BlackBerry Configuration Database after the upgrade to the BlackBerry Enterprise Server 27

Specifying permissions when connecting to the BlackBerry Enterprise Server databases using Windows authentication 27

Assign Microsoft SQL Server permissions to the Microsoft Windows account 27

Configuring authentication to the BlackBerry MDS Integration Service database ... 28

6 Performing the upgrade from the BlackBerry Professional Software to the BlackBerry Enterprise Server on the existing host computer ... 29

Prerequisites: Upgrading from the BlackBerry Professional Software to the BlackBerry Enterprise Server on the existing host computer ... 29

Stop the BlackBerry Professional Software services ... 29

Upgrade from the BlackBerry Professional Software to the BlackBerry Enterprise Server on the existing host computer ... 30

Improve the startup performance of the BlackBerry Enterprise Server after the upgrade ... 30

7 Performing the upgrade from the BlackBerry Professional Software to the BlackBerry Enterprise Server on a new host computer ... 31

Prerequisites: Upgrading from the BlackBerry Professional Software to the BlackBerry Enterprise Server on a new host computer ... 31

Configuring the local permissions on the new host computer ... 31

Moving the BlackBerry Configuration Database to the new host computer ... 32

Stop the BlackBerry Professional Software services ... 32

Upgrade from the BlackBerry Professional Software to the BlackBerry Enterprise Server on a new host computer ... 33

Improve the startup performance of the BlackBerry Enterprise Server after the upgrade ... 33

8 Troubleshooting the BlackBerry Enterprise Server upgrade process ... 35

A third-party tool did not install successfully and the BlackBerry Enterprise Server setup application closed ... 35

Previous version detected but no database available ... 35

The BlackBerry Collaboration Service does not connect to Microsoft Office Live Communications Server 2005 ... 36

The setup application did not prompt you to change or confirm the MAPI profile ... 36

You cannot resolve errors that occur when you move users ... 36

You encounter errors when you try to upgrade the BlackBerry Configuration Database ... 37

The setup application prompts you for access to the installation media for Microsoft .NET Framework version 1.1 ... 37

Service failed to start, generating error 5305 ... 37

BlackBerry Router and BlackBerry Dispatcher do not install during the migration or upgrade process ... 41

I am experiencing an issue after I install the BlackBerry Professional Software on the Windows Small Business Server ... 41

Microsoft Outlook Web Access no longer works after I install the BlackBerry Professional Software ... 42

Restore the BlackBerry Configuration Database 42

9 Upgrading the BlackBerry Device Software 45

Permitting users to upgrade the BlackBerry Device Software from their computers 45

Configure a network drive 46

Save the BlackBerry Device Software installation files to the network drive 46

Verify the version of the application loader tool 46

Pushing the BlackBerry Desktop Software or BlackBerry Device Manager installation files to users' computers 46

Synchronizing wireless data automatically 47

Create the BlackBerry Device Software upgrade instructions for BlackBerry device users 47

Confirming that the BlackBerry Device Software upgrade process completed successfully 48

Upgrading the BlackBerry Device Software at a central computer 48

Configure a network drive 49

Save the BlackBerry Device Software installation files to the network drive 49

Create a software configuration for the BlackBerry Device Software 49

Assign the software configuration to a user account 50

Upgrade the BlackBerry Device Software at a central computer 50

Verify that the BlackBerry Device Software upgrade at a central computer completed successfully 50

Pushing the BlackBerry Device Software and the BlackBerry Desktop Software to users' computers 51

Configure a network drive 51

Save the BlackBerry Device Software installation files to the network drive 51

Save the BlackBerry Desktop Software installation files to the network drive 52

Synchronizing wireless data automatically 52

Send the installation files for the BlackBerry Desktop Software and the BlackBerry Device Software to users using a third-party application 52

Confirming that the BlackBerry Device Software upgrade process completed successfully 53

10 Troubleshooting the BlackBerry Device Software upgrade process 55

When users click the link to the application loader tool in the upgrade instructions, the upgrade process does not start 55

11 Glossary 57

12 Legal notice 61

Upgrading from the BlackBerry Professional Software to the BlackBerry Enterprise Server 1

Your organization can upgrade from the BlackBerry® Professional Software to a supported higher version of the BlackBerry® Enterprise Server. The decision to upgrade might be influenced by factors such as the following:

- The number of BlackBerry device users in your organization is approaching the maximum of 30 users.
- The number of users or administrators in your organization requires group-based or role-based administration.
- Users need access to applications that were developed using the BlackBerry® MDS Studio or the BlackBerry® Plug-in for Microsoft® Visual Studio®.
- Users want to use collaboration clients, such as the BlackBerry® Client for IBM® Lotus® Connections.

Feature comparison for the BlackBerry Professional Software and the BlackBerry Enterprise Server

Feature	BlackBerry Professional Software	BlackBerry Enterprise Server
supported database engines	• Microsoft® SQL Server® • Microsoft® SQL Server® 2005 Express • MSDE 2000	• Microsoft SQL Server • Microsoft SQL Server 2005 Express (not supported by the BlackBerry® MDS Integration Service) • MSDE 2000
installation possible on messaging server	yes	no
support for remote components	no	yes
BlackBerry MDS Runtime Application support	no	yes
support for collaboration clients	no	yes
BlackBerry Manager	highlights the tasks that administrators in smaller organizations most frequently perform	full enterprise administration
number of users	maximum of 30 users	limited only by the scalability of the system configuration
users	Add Users wizard	add users manually

Feature	BlackBerry Professional Software	BlackBerry Enterprise Server
groups	user administration only	group administration or user administration
roles	user administration only	role-based administration
IT policy	predefined IT policy bundles	custom IT policies only
domains	single domain only	multiple domain administration
support for Wi-Fi® connections	no	yes
support for BlackBerry® Enterprise Server Resource Kit	no	yes

Host server and database upgrade scenarios

Hardware	Scenario
host server	The BlackBerry® Professional Software must be installed on the computer where you plan to install the BlackBerry® Enterprise Server software. • If the BlackBerry Professional Software is currently installed on a computer that is separate from the messaging server, you can upgrade to the BlackBerry Enterprise Server on the same computer. • If the BlackBerry Professional Software is currently installed on the computer that hosts the messaging server, you must first install the BlackBerry Professional Software on the computer where you plan to install the BlackBerry Enterprise Server software. You can then upgrade to the BlackBerry Enterprise Server on this computer. • If you plan to install the BlackBerry Enterprise Server components on more than one computer, you must install the BlackBerry Professional Software on each computer that you plan to use. You can then upgrade to the BlackBerry Enterprise Server on each computer.
database	• If the computer that hosts the messaging server currently also hosts the BlackBerry Configuration Database, you do not have to move the BlackBerry Configuration Database when you upgrade to the BlackBerry Enterprise Server. • If you plan to move the existing BlackBerry Configuration Database to a new Microsoft® SQL Server®, you must perform the move before you begin the upgrade process.

Hardware	Scenario
	• If the BlackBerry Configuration Database is currently installed on a computer that is separate from the messaging server, you can configure the connection to the BlackBerry Configuration Database during the BlackBerry Enterprise Server upgrade process. • If you are adding a large number of users, or if you expect a significant increase in the number of email messages that users send and receive, consider moving the BlackBerry Configuration Database to its own host computer. You perform this move before you begin the upgrade process. For information about moving the BlackBerry Configuration Database, visit www.blackberry.com/support to read article KB03112.

System requirements 2

For information about calculating hardware requirements, visit www.blackberry.com/go/serverdocs to see the *BlackBerry Enterprise Server Capacity Calculator* and *BlackBerry Enterprise Server Performance Benchmarking*.

System requirements: BlackBerry Enterprise Server

Item	Requirement
operating system	Any of the following operating systems: • Windows® 2000 SP4 Server or Advanced Server • Windows Server® 2003 or later • Windows Server 2003 or later (64-bit) • Windows Server 2003 R2 SP2 • Windows Server 2003 R2 SP2 (64-bit) • Windows® Small Business Server 2003 Standard or Premium
messaging server	Any of the following messaging servers installed physically close to where you plan to install the BlackBerry® Enterprise Server: • Microsoft® Exchange version 5.5 • Microsoft Exchange 2000 • Microsoft Exchange 2003 or later • Microsoft Exchange 2007 • Microsoft Exchange mixed environment (any combination of Microsoft Exchange version 5.5, Microsoft Exchange 2000, Microsoft Exchange 2003, and Microsoft Exchange 2007) • Microsoft® Solution for Hosted Messaging and Collaboration version 3.5
system tools for the messaging server	Any of the following system tools for the messaging server installed on the computer that hosts the BlackBerry Enterprise Server: • Microsoft Exchange version 5.5 Administrator • Microsoft Exchange 2000 System Manager • Microsoft Exchange 2003 System Manager • Microsoft Exchange Server MAPI client and CDO 1.2.1

Item	Requirement
	• to support Microsoft Exchange 2007, either Microsoft Exchange Server MAPI client and CDO 1.2.1, or Microsoft Exchange 2003 SP2 System Tools
Microsoft Exchange Organization of the system tools for the messaging server	same Microsoft Exchange Organization as the messaging server
version of the CDO library	latest version that is supported by the latest version of Microsoft Exchange in your organization's environment
Unicode support for calendars	To support Microsoft Exchange 2003, the following Microsoft hotfixes installed: • 913643 on your organization's messaging server • 923537 on the computer that hosts the BlackBerry Enterprise Server
Internet Service Manager	to support Microsoft Exchange 2007, the Internet Service Manager component of Microsoft® IIS
database management system	Any of the following database management systems: • MSDE 2000 • Microsoft® SQL Server® 2000 SP4 • Microsoft SQL Server 2005 or later Professional, Enterprise, or Express • Microsoft SQL Server 2005 or later (64-bit)
collation setting	To support Microsoft SQL Server, the following conditions on the database server: • collation setting is default case-insensitive • BlackBerry Configuration Database collation setting is default case-insensitive
remote database conditions	named pipes and TCP/IP network protocols turned on
data access components	Any of the following data access components on the computers that host the BlackBerry Enterprise Server or the BlackBerry Configuration Database: • MDAC version 2.8 with Security Patch MS04-003 (version 2000.85.1025.00) • MDAC version 2.8.2 (version 2000.86.1830.00), included with Windows Server 2003 SP1
database conditions for the BlackBerry MDS Integration Service	A database server with the following conditions: • host for the BlackBerry Configuration Database • support for mixed-mode authentication

Item	Requirement
Microsoft® .NET Framework	to support languages other than English, localized version of Microsoft .NET Framework version 1.1 SP1
instant messaging server	Any of the following instant messaging servers: • IBM® Lotus® Sametime® version 6.5.1 Community Server (version 6.5.1 or later required to support dormant mode) • IBM Lotus Sametime version 7.0 Community Server • IBM Lotus Sametime version 7.5 Community Server • IBM Lotus Sametime version 8.0 Community Server • Microsoft® Office Live Communications Server 2005 (SP1 required to support Microsoft® Office Communicator and dormant mode) • Microsoft® Office Communications Server 2007 Standard or Enterprise • Novell® GroupWise® Messenger version 2.0.1 or later
browser	Microsoft® Internet Explorer® with the following settings: • Java® or JavaScript® turned on • language preferences configured to display encoded web pages
media player	to support audio attachments, Windows Media® Player version 9 or later
network proximity	high-speed, switched connection between the BlackBerry Enterprise Server and the messaging servers
firewall	A firewall or proxy firewall with the following conditions: • support for the BlackBerry Enterprise Server to initiate an outgoing, two-way TCP/IP connection to an external server on port 3101 • support for the resolution of Internet addresses using DNS • transparency of the proxy server for proxy firewalls

System requirements: BlackBerry Attachment Service

The following system requirements apply when installing the BlackBerry® Attachment Service on a computer separate from the BlackBerry® Enterprise Server.

Item	Requirement
operating system	Any of the following operating systems:

Item	Requirement
	• Microsoft® Windows® 2000 SP4 (Server edition or Advanced Server edition) • Microsoft® Windows Server® 2003 SP1 • Microsoft® Windows® XP Professional SP2
media player	To support audio attachments, Windows Media® Player Version 9 or later
web browser	Microsoft® Internet Explorer® with the following settings: • Java® or JavaScript® turned on • language preferences configured to display encoded web pages

System requirements: BlackBerry Manager

The following system requirements apply when installing the BlackBerry® Manager on a computer separate from the BlackBerry® Enterprise Server.

Item	Requirement
operating system	Any of the following operating systems: • Windows® 2000 SP4 (Server, Advanced Server, or Professional) • Windows Server® 2003 or later • Windows Server 2003 or later (64-bit) • Windows Server 2003 R2 SP2 • Windows Server 2003 R2 SP2 (64-bit) • Windows® XP Professional SP2 • Windows® Small Business Server 2003 (Standard edition or Premium edition)
messaging server system tools	Any of the following messaging server system tools: • Microsoft® Exchange version 5.5 Administrator • Microsoft Exchange 2000 System Manager • Microsoft Exchange 2003 System Manager • Microsoft Exchange Server MAPI client and CDO 1.2.1 • for Microsoft Exchange 2007, either Microsoft Exchange Server MAPI client and CDO 1.2.1 or Microsoft Exchange 2003 SP2 System Tools

Item	Requirement
Microsoft Exchange Organization of the messaging server system tools	the same Microsoft Exchange Organization as the messaging server
version of the messaging server system tools	the same version as the messaging server
version of the CDO library	the latest version that is supported by the latest version of Microsoft Exchange in your environment
Internet Service Manager	To support Microsoft Exchange 2007, the Internet Service Manager component of Microsoft® Internet Information Services installed
Microsoft® .NET Framework	To support languages other than English, localized version of Microsoft .NET Framework version 1.1 SP1
browser	Microsoft® Internet Explorer® with the following settings: • Java® or JavaScript® turned on • language preferences set to display encoded web pages
data access components	Any of the following data access components: • MDAC version 2.8 with Security Patch MS04-003 (version 2000.85.1025.00) • MDAC version 2.8 SP2 (version 2000.86.1830.00)
printer and file sharing	To support BlackBerry device implementation, printer and file sharing turned on
USB hub	To support BlackBerry device implementation that uses a hub, a USB driver that supports USB 1.1-compliant hubs

System requirements: BlackBerry MDS Connection Service

The following system requirements apply when installing the BlackBerry® MDS Connection Service on a computer separate from the BlackBerry® Enterprise Server.

Item	Requirement
operating system	Any of the following operating systems: • Microsoft® Windows® 2000 SP4 (Server edition, Advanced Server edition, or Professional edition) • Microsoft® Windows Server® 2003 SP1 • Microsoft® Windows® XP Professional SP2

Item	Requirement
	• Microsoft® Windows® Small Business Server 2003 (Standard edition or Premium edition)
messaging server application	To support BlackBerry Enterprise Server Version 3.5 and BlackBerry Enterprise Server Version 3.6, any of the following applications: • Microsoft® Exchange Version 5.5 Administrator • Microsoft Exchange 2000 System Manager • Microsoft Exchange 2003 System Manager • Microsoft Exchange Server MAPI client and CDO 1.2.1 • for Microsoft Exchange 2007, either Microsoft Exchange Server MAPI client and CDO 1.2.1 or Microsoft Exchange 2003 SP2 System Tools
RSA® Authentication Agent	To support enhanced network authentication, RSA Authentication Agent Version 5.0 for Microsoft Windows

System requirements: BlackBerry MDS Integration Service

The following system requirements apply when installing the BlackBerry® MDS Integration Service on a computer separate from the BlackBerry® Enterprise Server.

Item	Requirement
operating system	Any of the following operating systems: • Microsoft® Windows® 2000 SP4 (Server edition or Advanced Server edition) • Microsoft® Windows Server® 2003 SP1 • Microsoft® Windows® XP Professional SP2
database conditions	A database server that is the the host for the BlackBerry Configuration Database.

System requirements: BlackBerry Router

The following system requirements apply when installing the BlackBerry® Router on a computer separate from the BlackBerry® Enterprise Server.

Item	Requirement
operating system	Any of the following operating systems: • Microsoft® Windows® 2000 SP4 (Server edition or Advanced Server edition) • Microsoft® Windows Server® 2003 SP1 • Microsoft® Windows® XP Professional SP2
firewall	A firewall or proxy firewall with the following conditions: • support for the BlackBerry Router to initiate an outgoing, two-way TCP/IP connection to an external server on port 3101 • support for the resolution of Internet addresses using DNS • transparency of the proxy server for proxy firewalls

Supported environments

Item	Description
virtual environment	The BlackBerry® Enterprise Server and its components support the following virtual environments: • VMware® ESX Server Version 2.5.2 or later • VMware ESX Server Version 3.0.1
Windows® Messenger	The BlackBerry Collaboration Service supports Windows® Messenger if MSMQ Version 3.0 is installed. If installed separately from Microsoft® Windows Server® 2003, the default Microsoft® Active Directory® Integration and Triggers subcomponents must be cleared, and only the Common subcomponent must be selected.
Windows® Messenger with TLS	The BlackBerry Collaboration Service supports Windows® Messenger with TLS if one of the following certificates is installed on the computer that hosts the BlackBerry Collaboration Service: • if your instant messaging server is Microsoft® Office Live Communications Server 2005, an MTLS certificate

Item	Description
	• if your instant messaging server is Microsoft Office Live Communications Server 2005 SP1, a server authentication certificate for the computer account
IBM® Lotus® Sametime®	The BlackBerry Collaboration Service supports IBM Lotus Sametime when you add the IP address of the computer that hosts the BlackBerry Collaboration Service to the CommunityConnectivity document on the IBM Lotus Sametime server.
Novell® GroupWise® Messenger	The BlackBerry Collaboration Service supports Novell GroupWise Messenger when SSL authentication is turned on for the Novell GroupWise Messenger agents on the computer that hosts the BlackBerry Collaboration Service.
Microsoft® Office Communicator	The BlackBerry Collaboration Service supports Microsoft Office Communicator when MTLS and HTTPS certificates for communication with the Microsoft Office Live Communications Server are installed on the Microsoft® Office Communicator Web Access server.
Microsoft Office Communicator with TLS	The BlackBerry Collaboration Service supports Microsoft Office Communicator with TLS if one of the following certificates is installed on the computer that hosts the BlackBerry Collaboration Service: • if your instant messaging server is Microsoft Office Live Communications Server 2005, an MTLS certificate • if your instant messaging server is Microsoft Office Live Communications Server 2005 SP1, a server authentication certificate for the computer account

Microsoft Office Communicator and AJAX Service	The BlackBerry Collaboration Service supports Microsoft Office Communicator and AJAX Service with the following conditions:
	• the following Microsoft hotfixes from http://support.microsoft.com installed:
	  • 911996 on your Microsoft Office Live Communications Server
	  • 915066 on your Microsoft Office Communicator server
	• a virtual server installed on your Microsoft Office Communicator server, with the following conditions:
	  • all unassigned IP addresses
	  • forms-based authentication only
	  • support for an HTTPS browser connection

Item	Description
	• an ISAPI filter for the cwaauth.dll file and the ajax.dll file
enhanced network authentication	The BlackBerry Enterprise Server and its components support RSA® Authentication Agent Version 5.0 for Microsoft® Windows®.
SNMP monitoring	The BlackBerry Enterprise Server and its components support the SNMP service.
remote access	The BlackBerry Enterprise Server and its components support remote access using any of the following applications: • Terminal Services for use with Microsoft Windows Server 2000, installed using Remote Administration mode • Microsoft Remote Desktop Connection for use with Microsoft Windows Server 2003

Unsupported environments

Item	Description
DMZ	The BlackBerry® Enterprise Server and its components, with the exception of the BlackBerry Router, do not support installation in a DMZ.
messaging server	The BlackBerry Enterprise Server and its components do not support the installation of the messaging server on the same computer.
email application	The BlackBerry Enterprise Server and its components do not support the installation of email applications on the same computer.
Microsoft® SQL Server® 2005 Express database	The BlackBerry MDS Integration Service databases do not support the Microsoft SQL Server 2005 Express database.

Preparing to upgrade from the BlackBerry Professional Software to the BlackBerry Enterprise Server 3

Obtain the BlackBerry Enterprise Server software files

1. At www.blackberry.com/support/downloads, click **BlackBerry Enterprise Server**.
2. Download the current version of the BlackBerry® Enterprise Server software.
3. Double-click the downloaded .zip file.
4. Extract the files to a folder on the local drive of the computer that you plan to use to host the BlackBerry Enterprise Server.

Verify and record the name of the existing host computer for the BlackBerry Professional Software

If you plan to upgrade to the BlackBerry® Enterprise Server on a new host computer, you require the name of the existing host computer for the BlackBerry® Professional Software during the upgrade process.

1. In the BlackBerry Manager, click the **Home** tab.
2. In the right pane, verify the **Host Name** of the existing host computer for the BlackBerry Professional Software.
3. Record the host name.
4. Close the BlackBerry Manager.

Verify and record the name of the administration account for the BlackBerry Professional Software

During the upgrade process, you require the name of the account that you use to administer the BlackBerry® Professional Software.

1. On the computer that hosts the BlackBerry Professional Software, on the taskbar, click **Administrative Tools** > **Services**.
2. Right-click **BlackBerry Dispatcher**. Click **Properties**.
3. On the **Log On** tab, at the **This account** option, verify the domain and login name.
4. Record the account information.
5. Click **OK**.

Verify the names of the existing BlackBerry Configuration Database and its host computer

If you plan to use the existing BlackBerry® Configuration Database on its existing computer after upgrading to the BlackBerry® Enterprise Server, you record the database and computer names so that you can configure the database connection during the upgrade process.

1. On the computer that hosts the BlackBerry® Professional Software, on the taskbar, click **Start > Programs > BlackBerry Professional Software > BlackBerry Server Configuration**.
2. On the **Database Connectivity** tab, in the **SQL Information** section, verify the following information:
   - **Database** name for the BlackBerry Configuration Database
   - **SQL Server** name
3. Record the database and server information.

Verify the existing SRP authentication information

You received the SRP information when you purchased the BlackBerry® Professional Software. The setup application usually locates this information automatically, but as a best practice, consider recording the information so that it is available for use during the upgrade process.

1. On the computer that hosts the BlackBerry Professional Software, on the taskbar, click **Start > Programs > BlackBerry Professional Software > BlackBerry Server Configuration**.
2. On the **BlackBerry Server** tab, in the **SRP Authentication** section, verify the following information:
   - **SRP Identifier**
   - **SRP Authentication Key**
3. Record the SRP information.

Verify the existing CAL key

You received the CAL key when you purchased the BlackBerry® Professional Software. The setup application usually locates the CAL key automatically, but as a best practice, consider recording the license key information so that it is available for use during the upgrade process.

1. In the BlackBerry Manager, click the **Home** tab.
2. In the **Account** section, click **License Management**.
3. Record the **License Key** information.

Back up the BlackBerry Professional Software registry settings

You can back up the settings for the BlackBerry® Professional Software in the Windows® registry so that you can restore the settings, if required.

1. On the computer that hosts the BlackBerry Professional Software, on the taskbar, click **Start > Run**. Type **regedit**.
2. In the left pane, navigate to HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion.
3. Right-click **Research In Motion**. Click **Export**.
4. Save the file that you exported.

Back up the BlackBerry Professional Software log files

You can back up the existing log files so that you can troubleshoot the upgrade process if it does not complete successfully.

1. On the computer that hosts the BlackBerry® Professional Software, navigate to C:\Program Files\Research In Motion \BlackBerry Enterprise Server\Logs.
2. Copy the log files to a backup location.

Back up the BlackBerry Configuration Database

You can back up the BlackBerry® Configuration Database so that you can restore it, if necessary, after an installation, migration, or upgrade. You can also back up the BlackBerry Configuration Database if you plan to restore it to a different computer.

If your database environment is Microsoft® SQL Server®, you use the backup and restore tools that Microsoft® Corporation provides.

If your database environment is Microsoft SQL Server 2005 Express or MSDE 2000, you can use the BlackBerry Configuration Database Backup Tool that is included with the BlackBerry® Professional Software or the BlackBerry® Enterprise Server installation media.

By default, the backup file is named *<database name><YYYYMMDDHHMMSS>*.bak.

1. In the Windows® Services, stop the BlackBerry Professional Software services.
2. Perform one of the following actions:

Task	Steps
Back up from the Microsoft SQL Server Enterprise Manager.	a. Open the Microsoft SQL Server Enterprise Manager. b. Right-click the name of the BlackBerry Configuration Database. Click **All Tasks**. c. Click **Backup Database**.

Task	Steps
	d. Click **Add**. e. Type the names of the backup file and the backup directory. f. In the **Backup** section, click **Database - complete**. g. Click **OK**.
Back up from the Microsoft SQL Server Management Studio.	a. Open the Microsoft SQL Server Management Studio. b. Right-click the name of the BlackBerry Configuration Database. Click **Tasks**. c. Click **Back Up**. d. In the **Database** list, click the database name. e. In the **Backup type** list, click **Full**. f. In the **Backup component** list, click **Database**. g. Type the backup directory and file name. h. Click the type of backup destination. i. Click **OK**.
Back up from a command prompt.	a. On the computer that hosts the BlackBerry Configuration Database, at the command prompt, type the following command: **osql -E** b. Press ENTER. c. Type the following commands: **backup database <*databasename*> to disk = 'C:\<*databasename*>.bak'** **go** **quit**
Back up using the BlackBerry Configuration Database Backup Tool	a. At the command prompt, change to the **Tools** folder on the BlackBerry Professional Software or the BlackBerry Enterprise Server installation media.

Task	Steps
	b. Run the **BlackBerryDbBackup.exe** file, using the parameters that are explained in Blackberry Configuration Database Backup Tool parameters.

After you finish: Restore the BlackBerry Configuration Database to the same location or to a different computer.

BlackBerry Configuration Database Backup Tool parameters

The parameters listed in brackets are optional.

Parameter	Description
-d <*databasename*>	This parameter specifies the name of the BlackBerry® Configuration Database. For example, BESMgmt.
[-f] <*foldername*>	This parameter specifies the folder that you want to save the backup file in. If you specify a different location, the folder must already exist. The default folder is the current location.
[-S] <*database server*>	This parameter specifies the name of the server that hosts the database.
[-E]	This parameter specifies whether you want to use Microsoft® Windows® authentication to connect to the database instead of database authentication. Your login account must have database owner permission. The default is false.
[-U] <*username*>	This parameter specifies the user name for database authentication. If you want to use a different login account, the account must have database owner permission. The default is sa.
[-P] <*password*>	This parameter specifies the password for database authentication.
[-p] <*percentage*>	This parameter specifies the interval, in percentages, that you want the BlackBerry Configuration Database Backup Tool to report progress at. The default is 10.
[-?]	This parameter specifies information about the tool. No other parameters are required when you use this parameter.

Configuring a Microsoft Exchange 5.5, Microsoft Exchange 2000, or Microsoft Exchange 2003 messaging environment 4

Identify and resolve any Microsoft Exchange known issues for wireless calendar synchronization

You must read the Microsoft® Exchange known issues that might impact your messaging environment and install the hotfixes for them. If your messaging environment includes multiple messaging servers, resolve the known issues that apply to the latest version of the Microsoft Exchange software in your environment.

Without the proper fixes installed, the BlackBerry® Enterprise Server cannot function.

1. To determine which of the following Microsoft articles apply to your environment, visit www.support.microsoft.com:

Microsoft Exchange tool	Microsoft article
Microsoft Exchange Version 5.5 Administrator	• 312273 • 818709
Microsoft Exchange 2000 System Manager	• 314606 • 824960
Microsoft Exchange 2003 System Manager	• 823343 • 894470

2. Verify that your environment meets the requirements described in the applicable known issues.
3. Download and install the hotfixes for the known issues on the computers on which you plan to install the BlackBerry Enterprise Server and the BlackBerry Manager.

Setting up the database connection 5

The BlackBerry® Enterprise Server can connect to the BlackBerry Configuration Database on the Microsoft® SQL Server® using either Windows® authentication or database authentication.

If you use Windows authentication, the BlackBerry Manager logs in to the BlackBerry Configuration Database using the Windows account that you used to complete the installation.

If you use database authentication with Microsoft SQL Server, the BlackBerry Manager authenticates to the BlackBerry Configuration Database using the database credentials that you used when the database was set up.

Using the existing BlackBerry Configuration Database after the upgrade to the BlackBerry Enterprise Server

If you plan to use the existing BlackBerry® Configuration Database on its existing computer when you upgrade to the BlackBerry® Enterprise Server, no setup is required before you begin the upgrade process.

During the upgrade process, you specify whether the BlackBerry Configuration Database is installed locally or remotely, the name of the BlackBerry Configuration Database, and the name of the database server.

Specifying permissions when connecting to the BlackBerry Enterprise Server databases using Windows authentication

During the installation process, if you choose to connect to the BlackBerry® Enterprise Server databases using Windows® authentication, the Windows account that you use must have permissions on the database server. The type of permissions depends on the setup option that you choose, and whether you create the BlackBerry Enterprise Server databases on the same computer as the BlackBerry Enterprise Server components or on another database server.

Assign Microsoft SQL Server permissions to the Microsoft Windows account

> Perform one of the following actions:
- If you create the BlackBerry® Configuration Database on the same computer as the BlackBerry® Enterprise Server, or if you install the BlackBerry MDS Integration Service, assign the system administrator permission to the Microsoft® Windows® account that you are using to complete the installation.
- If you create the BlackBerry Configuration Database on another computer, assign server administrator and database creator permissions to the Microsoft Windows account that you are using to complete the installation. If you are using Microsoft® SQL Server® 2005, assign the system administrator permission, or each of the following roles: SQLAgentUserRole, SQLAgentReaderRole, and SQLAgentOperatorRole.

Configuring authentication to the BlackBerry MDS Integration Service database

If you install the BlackBerry® MDS Integration Service on a Microsoft® SQL Server®, the setup application uses the same authentication method and account that you specified for the BlackBerry Configuration Database. The account requires the same permissions for the BlackBerry MDS Integration Service database as it requires for the BlackBerry Configuration Database.

6 Performing the upgrade from the BlackBerry Professional Software to the BlackBerry Enterprise Server on the existing host computer

Prerequisites: Upgrading from the BlackBerry Professional Software to the BlackBerry Enterprise Server on the existing host computer

Perform the following actions:

- Obtain the BlackBerry® Enterprise Server software files.
- Purchase the BlackBerry® Enterprise Server Trade-Up Key.
- Verify that your organization meets the prerequisites for installing the BlackBerry Enterprise Server software.
- Back up the BlackBerry® Professional Software registry settings and log files.
- Back up the BlackBerry Configuration Database.
- If you plan to move the existing BlackBerry Configuration Database to a different computer or to a new Microsoft® SQL Server®, perform the move before you begin the upgrade process.

Verify that you have the following information available:

- BlackBerry Enterprise Server Trade-Up Key
- name of the computer that currently hosts the BlackBerry Professional Software
- name of the account that you use to administer the BlackBerry Professional Software
- existing CAL key, SRP authentication key, and SRP host name
- name of the BlackBerry Configuration Database
- name of the computer that hosts the BlackBerry Configuration Database

Stop the BlackBerry Professional Software services

You stop the BlackBerry® Professional Software services so that running services do not interfere with the upgrade process. You must stop the BlackBerry Professional Software services before you start the BlackBerry® Enterprise Server services.

1. Log in to the computer that hosts the BlackBerry Professional Software using the BESAdmin account.
2. On the taskbar, click **Administrative Tools** > **Services**.
3. In the Windows® Services, stop the BlackBerry Professional Software services.

Upgrade from the BlackBerry Professional Software to the BlackBerry Enterprise Server on the existing host computer

During the upgrade process, you must restart the computer. The restart can take several minutes.

Before you begin:

In the Windows® Services, stop the BlackBerry® Professional Software services.

1. Log in to the computer that hosts the BlackBerry Professional Software using the BESAdmin account.
2. On the BlackBerry® Enterprise Server installation media, double-click the **setup.exe** file.
3. Complete the instructions on the screen.
4. When prompted to restart the computer, click **Yes**.
5. Log in to the computer using the account that you used in step 1.
6. Complete the instructions on the screen.

Improve the startup performance of the BlackBerry Enterprise Server after the upgrade

After an upgrade, the BlackBerry® Enterprise Server might send new service books to every BlackBerry device. If it sends all the new service books at the same time, the BlackBerry Enterprise Server startup time might be affected. You can improve the startup performance of the BlackBerry Enterprise Server by configuring the number of service books that the BlackBerry Enterprise Server sends each hour.

1. On the computer that hosts an upgraded BlackBerry Policy Service, on the taskbar, click **Start > Run**. Type **regedit**.
2. In the left pane, navigate to HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server \BlackBerry IT Admin Server.
3. Right-click **BlackBerry IT Admin Server**. Click **New > DWORD Value**.
4. Create the following DWORD values if they do not already exist:
   - **SBThrottlingEnabled**: Right-click the new value. Click **Modify**. Set the **Value data** to **1**.
   - **SBThrottleLimit**: Right-click the new value. Click **Modify**. Set the **Value data**, in decimal format, to the maximum number of service books that you want the BlackBerry Enterprise Server to send each hour. The default is .60, which means that the BlackBerry Enterprise Server sends 60 new service books each hour.

7 Performing the upgrade from the BlackBerry Professional Software to the BlackBerry Enterprise Server on a new host computer

Prerequisites: Upgrading from the BlackBerry Professional Software to the BlackBerry Enterprise Server on a new host computer

Perform the following actions:

- Obtain the original installation media for the BlackBerry® Professional Software.
- Obtain the BlackBerry® Enterprise Server software files.
- Purchase the BlackBerry® Enterprise Server Trade-Up Key.
- Verify that your organization meets the prerequisites for installing the BlackBerry Enterprise Server.
- Back up the existing BlackBerry Professional Software registry settings and log files.
- Back up the BlackBerry Configuration Database.
- Install the BlackBerry Professional Software on the computer where you plan to install the BlackBerry Enterprise Server software. During the installation, use the existing CAL key information for the BlackBerry Professional Software.
- If you plan to move the existing BlackBerry Configuration Database to a different computer or to a new Microsoft® SQL Server®, perform the move before you begin the upgrade process.

Verify that you have the following information available:

- BlackBerry Enterprise Server Trade-Up Key
- name of the account that you use to administer the BlackBerry Professional Software
- existing CAL key, SRP authentication key, and SRP host name
- name of the BlackBerry Configuration Database
- name of the computer that you plan to use to host the BlackBerry Enterprise Server
- name of the computer that hosts the BlackBerry Configuration Database

Configuring the local permissions on the new host computer

On the new host computer, you must assign the following permissions for the account that you use to administer the BlackBerry® Enterprise Server:

- Local Administrator rights on the BlackBerry Enterprise Server
- Local Security Policy permissions for the BlackBerry Enterprise Server administration account
- in a Microsoft® Exchange 2000 or 2003 environment, Microsoft Exchange permissions at the Administrative Group level and at the Microsoft Exchange Server level
- in a Microsoft Exchange 2007 environment, permissions for an Exchange View Only Administrator role
- Send As, Receive As, and Administer Information Store permissions at the Microsoft Exchange Server level

- Send As permission on a single account for all BlackBerry device users in a Microsoft® Active Directory® domain or container
- database permissions for managing the BlackBerry Configuration Database

For information about how to configure the required permissions for the account that you use to administer the BlackBerry Enterprise Server, visit www.blackberry.com/support to read articles KB02276 and KB04557.

For information about how to configure the required database permissions, visit www.blackberry.com/support to read articles KB03112 and KB03633.

Moving the BlackBerry Configuration Database to the new host computer

You can use the backup and restore process to return to a previous version of the BlackBerry® Configuration Database after an installation, migration, or upgrade.

You can also use the restore process to move an existing BlackBerry Configuration Database to a different computer. You must first create an empty database on the new computer and then restore the existing database to the new location.

To move the BlackBerry Configuration Database, you perform the following actions:

- Back up the BlackBerry Configuration Database.
- Prepare the new Microsoft® SQL Server®.
- Restore the BlackBerry Configuration Database on the new computer.
- After you install the BlackBerry® Enterprise Server software, configure the BlackBerry Configuration Database information.

Stop the BlackBerry Professional Software services

You stop the BlackBerry® Professional Software services so that running services do not interfere with the upgrade process. You must stop the BlackBerry Professional Software services before you start the BlackBerry® Enterprise Server services.

1. Log in to the computer that hosts the BlackBerry Professional Software using the BESAdmin account.
2. On the taskbar, click **Administrative Tools** > **Services**.
3. In the Windows® Services, stop the BlackBerry Professional Software services.

Upgrade from the BlackBerry Professional Software to the BlackBerry Enterprise Server on a new host computer

During the upgrade process, you must restart the computer. The restart can take several minutes.

Before you begin: Verify that the BlackBerry® Professional Software is installed on the computer that you plan to use to host the BlackBerry® Enterprise Server. If you plan to install one or more BlackBerry Enterprise Server components on separate computers, you must install the BlackBerry Professional Software on each computer before you begin the upgrade process.

1. Log in to the computer that you plan to use to host the BlackBerry Enterprise Server using the BESAdmin account.
2. On the BlackBerry Enterprise Server installation media, double-click the **setup.exe** file.
3. Complete the instructions on the screen.
4. When prompted to restart the computer, click **Yes**.
5. Log in to the computer using the account that you used in step 1.
6. Complete the instructions on the screen.

Improve the startup performance of the BlackBerry Enterprise Server after the upgrade

After an upgrade, the BlackBerry® Enterprise Server might send new service books to every BlackBerry device. If it sends all the new service books at the same time, the BlackBerry Enterprise Server startup time might be affected. You can improve the startup performance of the BlackBerry Enterprise Server by configuring the number of service books that the BlackBerry Enterprise Server sends each hour.

1. On the computer that hosts an upgraded BlackBerry Policy Service, on the taskbar, click **Start > Run**. Type **regedit**.
2. In the left pane, navigate to HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server \BlackBerry IT Admin Server.
3. Right-click **BlackBerry IT Admin Server**. Click **New > DWORD Value**.
4. Create the following DWORD values if they do not already exist:
   - **SBThrottlingEnabled**: Right-click the new value. Click **Modify**. Set the **Value data** to **1**.
   - **SBThrottleLimit**: Right-click the new value. Click **Modify**. Set the **Value data**, in decimal format, to the maximum number of service books that you want the BlackBerry Enterprise Server to send each hour. The default is .60, which means that the BlackBerry Enterprise Server sends 60 new service books each hour.

Troubleshooting the BlackBerry Enterprise Server upgrade process 8

A third-party tool did not install successfully and the BlackBerry Enterprise Server setup application closed

Possible solution

1. On the BlackBerry® Enterprise Server installation media, open the **Tools** folder.
2. Double-click the setup application file for the tool that you want to install.
3. Complete the instructions on the screen.
4. Restart the BlackBerry Enterprise Server setup application.

Previous version detected but no database available

When you start the setup application, the following message appears, and the setup application stops: "Previous version detected but no database available."

Possible solution

The registry keys that identify the BlackBerry® Configuration Database must exist in the Registry Editor.

1. On the server that hosts the BlackBerry® Enterprise Server, on the taskbar, click **Start > Run**. Type **regedit**.
2. In the left pane, navigate to HKEY_LOCAL_MACHINE\Research In Motion\BlackBerry Enterprise Server\Database.
3. Right-click **Database**. Click **New > String Value**.
4. Create the following case-sensitive String values if they do not already exist:
   - **DatabaseName**: Right-click the new value. Click **Modify**. Set the **Value data** to the name of the BlackBerry Configuration Database.
   - **DatabaseServerMachineName**: Right-click the new value. Click **Modify**. Set the **Value data** to the computer name of the server that hosts the BlackBerry Configuration Database.
5. Restart the setup application.

The BlackBerry Collaboration Service does not connect to Microsoft Office Live Communications Server 2005

Possible solution

If your organization's instant messaging environment supports Windows® Messenger with TLS, you must configure authentication.

1. Download the trial edition of Microsoft® Office Communicator 2005 from www.microsoft.com/downloads.
2. Install Microsoft Office Communicator 2005 on the computer that hosts the BlackBerry® Collaboration Service.
3. Connect to Microsoft® Office Live Communications Server 2005 using Microsoft Office Communicator 2005.
4. If a connection does not open, verify that you installed or imported the certificates required for authentication.

The setup application did not prompt you to change or confirm the MAPI profile

Possible solution

Create and change the MAPI profile manually.

1. On the BlackBerry® Enterprise Server installation media, open the **Tools** folder.
2. Double-click the **Fixmapisvc.exe** file.
3. Verify that **mapisvc.inf** is installed at C:\winnt\system32\ or C:\windows\system32\.
4. On the taskbar, click **Start > BlackBerry Enterprise Server > Edit MAPI Profile**.
5. Type the Microsoft® Exchange server name.
6. Click the Windows® account that is associated with the MAPI profile.
7. Click **OK**.

You cannot resolve errors that occur when you move users

Possible solution

1. Delete the user accounts from the BlackBerry® Enterprise Server before you start the upgrade process.
2. Add the user accounts to the BlackBerry Enterprise Server when the upgrade process completes.
3. Activate users' BlackBerry devices over the wireless network.

You encounter errors when you try to upgrade the BlackBerry Configuration Database

Possible solution

1. Navigate to C:\Program Files\Research In Motion\BlackBerry Enterprise Server\Logs\Installer or to the location of the log files that you specified in the setup application.
2. Open **DB_InstallV<*YYMMDDHHMMSS*>.log**, where *<YYMMDDHHMMSS>* specifies the date and time, in 24 hour clock format, that you upgraded the BlackBerry Configuration Database.
3. Check the log file for error messages.

The setup application prompts you for access to the installation media for Microsoft .NET Framework version 1.1

When the BlackBerry® Enterprise Server setup application installs Microsoft® .NET Framework version 1.1 SP1 on a computer that hosts a previously installed version of Microsoft .NET Framework version 1.1, it prompts you for access to the installation media for Microsoft .NET Framework version 1.1.

Possible solution

You can access the netfx.msi file that is included with the BlackBerry Enterprise Server installation media.

1. On the BlackBerry Enterprise Server installation media, open the **Tools** folder.
2. Double-click the **netfx.msi** file.
3. Complete the instructions on the screen.

Service failed to start, generating error 5305

Thiss message appears when you start the Microsoft® Windows® account that runs the BlackBerry® Professional Software.

Possible cause	Possible solution
The Microsoft® Exchange Information Store service was not started on the Microsoft Exchange Server that hosts the mailbox for the Microsoft® Windows® account that runs the BlackBerry Professional Software.	1. On the Microsoft Exchange Server, on the taskbar, click **Start > Administrative Tools > Services**. 2. Right-click **Microsoft Exchange Information Store**. 3. Click **Properties**.

Possible cause	Possible solution
	4. Click **Start**.
If a Messaging Application Programming Interface (MAPI) profile was created using a profile wizard, this message might appear for one of the following reasons: • The profile wizard might return more than one mailbox for the Microsoft Windows account that runs the BlackBerry Professional Software. • The Microsoft Exchange Server might not host the mailbox for the administration account for the BlackBerry Professional Software. • The MAPI profile might be configured to use a method of authentication other than NT Password Authentication, which requires a user name, domain, and password.	1. On the server that hosts the BlackBerry Professional Software, on the taskbar, click **Start** > **Programs** > **BlackBerry Professional Software** > **BlackBerry Server Configuration**. 2. On the **BlackBerry Server** tab, click **Edit MAPI Profile**. 3. Type the Microsoft Exchange Server name. 4. Type the mailbox name of the Microsoft Windows account that runs the BlackBerry Professional Software. 5. Click **OK**.
The security settings in the MAPI properties are configured to prompt for a password, but Distributed Password Authentication is configured.	Change the MAPI authentication method to Windows NT Password Authentication. 1. On the server that hosts the BlackBerry Professional Software, on the taskbar, click **Start** > **Programs** > **BlackBerry Professional Software** > **BlackBerry Server Configuration**. 2. On the **BlackBerry Server** tab, click **Edit MAPI Profile**. 3. On the **Advanced** tab, in the **Logon network security** drop-down list, click **NT Password Authentication**. 4. Click **Apply**.
The Microsoft Windows account that is used to run the BlackBerry Professional Software was deleted.	Restore the Microsoft Windows account from a backup file, or create a new account. For more information about how to create a new account, see the *BlackBerry Professional Software Getting Started Guide*.

Possible cause	Possible solution
The Microsoft Windows account that is used to run the BlackBerry Professional Software was migrated to a new server, and its location was not updated through directory replication.	1. On the server that hosts the BlackBerry Professional Software, on the taskbar, click **Start > Run**. 2. Type **cd\Program Files\Research In Motion \BlackBerry Enterprise Server\Utility** 3. Type **handheldcleanup.exe -u** 4. In the **ProfileName** drop-down list, click **BlackBerryServer**. 5. Click **OK**. 6. At the command prompt, type the name of the server that hosts the BlackBerry Professional Software as the name appears on the Home tab of the BlackBerry Manager. 7. To exit from the command prompt window, type **exit**. 8. In the Microsoft Windows Services panel, restart the BlackBerry services.
Microsoft® Outlook® is installed on the server that hosts the BlackBerry Professional Software.	1. Remove Microsoft Outlook from the host server. 2. Install or re-apply Microsoft Exchange Administration 4.5 Service Pack 4 or the Microsoft Exchange System Management Tools for Microsoft Exchange 2000 or Microsoft Exchange 2003.
The Server Routing Protocol (SRP) identifier is not listed in Exchange 5.5 Administrator > Configuration > BlackBerry Servers > System Info.	Uninstall and then re-install the BlackBerry Professional Software using the same configuration information that you used in the original installation. Do not click the Remove Server button at BlackBerry Servers. Removing the server eliminates any possibility of restoring existing user accounts that are serviced by the BlackBerry Professional Software.
In a Microsoft Exchange 2000 or Microsoft Exchange 2003 environment, this message might appear for one of the following reasons:	1. Grant all required permissions to the Microsoft Windows account that is used to run the BlackBerry Professional Software. For more information, see the *BlackBerry Professional Software Getting Started Guide*.

Possible cause	Possible solution
• permissions for the Microsoft Windows account that is used to run the BlackBerry Professional Softwareare not correctly specified or are missing • MAPI profile for the Microsoft Windows account is incorrect or is not specified	2. When you are prompted for the MAPI profile name, type the MAPIProfile name that is in the registry at HKEY_CURRENT_USER/Software/Research In Motion/BlackBerry Enterprise Server/Management.
The Microsoft Exchange Server was upgraded to Microsoft Windows 2003 with Microsoft Exchange2003, but the BlackBerry Professional Software is installed on a computer that is running Microsoft Windows Server 2000 and Microsoft Exchange 2000 System Manager.	1. Install Microsoft Exchange 2003 System Manager on the server that hosts the BlackBerry Professional Software. 2. On the server that hosts the BlackBerry Professional Software, on the taskbar, click **Start** > **Programs** > **BlackBerry Professional Software** > **BlackBerry Server Configuration**. 3. On the **BlackBerry Server** tab, click **Edit MAPI Profile**. 4. Type the Microsoft Exchange Server name. 5. In the **Mailbox** field, type the name of the Microsoft Windows account that is used to run the BlackBerry Professional Software. 6. Click **Apply**.
The Microsoft Windows account that is used to run the BlackBerry Professional Software does not have access to the Global Address List or if the account is not visible in the Global Address List. This is typical in hosted environments, in which the Global Address List is isolated for each organization that uses the hosted services.	1. Make the Microsoft Windows account that is used to run the BlackBerry Professional Software visible in the Global Address List. 2. Grant the account unrestricted access to the Global Address List so that it can resolve its own mailbox location and those of all BlackBerry device users, regardless of the organization they belong to.
The Microsoft Windows account that is used to run the BlackBerry Professional Software is corrupted and cannot access mailboxes for BlackBerry device users.	Re-create the Microsoft Windows account that is used to run the BlackBerry Professional Software, and grant the account all required permissions. For more information about how to create a new account, see the *BlackBerry Professional Software Getting Started Guide*.
A Public Folder storage group and database were not created during the installation of Microsoft Exchange 2007 Server.	Create a Public Folder storage group and database on theMicrosoft Exchange 2007 Server. For more information, see the *BlackBerry Professional Software Getting Started Guide*.

BlackBerry Router and BlackBerry Dispatcher do not install during the migration or upgrade process

When you migrate or upgrade to the BlackBerry® Professional Software from BlackBerry® Enterprise Server - Small Business Edition or BlackBerry Enterprise Server Express, the BlackBerry Router and BlackBerry Dispatcher do not install, and the BlackBerry Professional Software does not run.

The log files for the setup application do not display any error messages for the migration or upgrade process.

Possible solution

Remove and then re-install the BlackBerry Professional Software.

When you re-install the BlackBerry Professional Software, you must specify both the name of the Microsoft® SQL Server® that hosts your existing BlackBerry Configuration Database and the name of the original database (the default name is BESMgmt).

To point your database to the correct Microsoft SQL Server and database name, at the **Database Settings** step of the migration or upgrade process, consider the following information:

- In the **Database Location** section, specify whether your existing BlackBerry Configuration Database is running on a locally hosted Microsoft SQL Server or on a remote server.
- In the **Database Information** section, type either the computer name or the IP address of the Microsoft SQL Server.
- In the **Database Information** section, type the name of the existing database.
- In the **Database authentication** section, select the authentication type for your existing database. If you are installing a new database, select **Windows (trusted)** authentication.

I am experiencing an issue after I install the BlackBerry Professional Software on the Windows Small Business Server

Possible cause

After you install the BlackBerry® Professional Software on the Windows® Small Business Server, the BlackBerry Controller might not be able to start the BlackBerry Messaging Agent.

As a result, you might experience any of the following issues:

- You cannot activate user accounts.
- A "Pending delete" message appears when you try to add a user account.
- The BlackBerry Professional Software appears to be unavailable for processes that directly use the BlackBerry Messaging Agent.
- The BlackBerry Messaging Agent does not create log files.

Possible solution

For more information about possible causes and solutions for these issues, visit www.blackberry.com/support to read article KB04646.

Microsoft Outlook Web Access no longer works after I install the BlackBerry Professional Software

Possible cause

In a Microsoft® Exchange 2007 environment, Microsoft® Outlook® Web Access requires Microsoft .NET Framework version 2.0. The setup application for the BlackBerry® Professional Software automatically installs Microsoft® .NET Framework version 1.1, which can overwrite an existing installation of Microsoft .NET Framework version 2.0.

As a result, users might receive a "Service Unavailable" message when they try to use Microsoft Outlook Web Access 2007.

Possible solution

Restore Microsoft .NET Framework version 2.0. For more information, visit www.blackberry.com/support to read article KB15040.

Restore the BlackBerry Configuration Database

You can use the backup and restore process to return to a previous version of the BlackBerry® Configuration Database after an installation, migration, or upgrade.

You can also use the restore process to move an existing BlackBerry Configuration Database to a different computer. You must first create an empty database on the new computer and then restore the existing database to the new location.

1. If you want to move the existing BlackBerry Configuration Database, perform the following actions:
   - On the new host computer for the BlackBerry Configuration Database, extract the setup application files for the BlackBerry® Professional Software or the BlackBerry® Enterprise Server.
   - At the command prompt, navigate to the **Database** folder in the extracted files.
   - Type the following command:

     createdb besmgmt.cfg
2. In the Windows® Services, stop the BlackBerry Professional Software services.
3. Perform one of the following tasks:

Task	Steps
Restore from the Microsoft® SQL Server® Enterprise Manager.	a. Open the Microsoft SQL Server Enterprise Manager. b. Right-click the name of the BlackBerry Configuration Database. Click **All Tasks**.

Task	Steps
	c. Click **Restore Database**. d. On the **General** tab, in the **Restore** section, click **From device**. e. In the **Choose Restore Devices** section, click **Add**. f. In the **File name** field, navigate to the backup file (for example, besmgmt.bak). g. In the **Restore backup set** section, click **Database - complete**. h. In each window, click **OK** until the restore process begins.
Restore from the Microsoft SQL Server Management Studio.	a. Open the Microsoft SQL Server Management Studio. b. Right-click the name of the BlackBerry Configuration Database. Click **Tasks**. c. Click **Restore**. d. Click **Database**. e. In the **To database** list, click the new database name. f. In the **From database** list, click the name of the database that you want to restore. g. Click **OK**.
Restore from a command prompt.	a. On the computer that hosts the BlackBerry Configuration Database, at the command prompt, type the following command: **osql -E** b. Press ENTER. c. Type the following commands: **restore database <*databasename*> from disk = 'C:\<*databasename*>.bak'** **go** **quit**
Restore using the BlackBerry Configuration Database Backup Tool	a. On the computer that hosts the BlackBerry Configuration Database, at the command prompt, change to *<extracted folder>*\Tools. b. Type **BlackBerryDBRestore.exe**.

Task	Steps
	c. Type the same parameters that you used when you backed up the database. d. Press ENTER.

Upgrading the BlackBerry Device Software 9

If you want to make the new features of the BlackBerry® Enterprise Server available to users in your organization, you can upgrade the BlackBerry® Device Software and the BlackBerry® Desktop Software when you upgrade the BlackBerry Enterprise Server.

You can choose one of the following upgrade methods:

- permit users to upgrade the BlackBerry Device Software at their computers
- upgrade the BlackBerry Device Software at a central computer
- push the BlackBerry Device Software and the BlackBerry Desktop Software to users' computers

For more information about the BlackBerry Device Software and the BlackBerry Desktop Software, visit www.blackberry.com/support.

Permitting users to upgrade the BlackBerry Device Software from their computers

If you want users to upgrade the BlackBerry® Device Software from their computers, you can install the BlackBerry Device Software and the application loader tool on a network drive.

Advantages	Disadvantages
• You can automate the process for upgrading the BlackBerry Device Software so that users do not have to complete any upgrade tasks for BlackBerry devices that use a USB connection. • You can upgrade BlackBerry devices remotely.	• You cannot manage BlackBerry Device Software upgrades using software configurations. • You cannot make users upgrade the BlackBerry Device Software. • This upgrade process increases network traffic to the network drive.

This upgrade process only applies if users have one of the following desktop software versions:

- BlackBerry® Desktop Software Version 3.6 or later
- BlackBerry® Handheld Manager Version 3.6 or later

After the upgrade process completes, the application loader tool connects to the messaging server to provision the BlackBerry devices.

Configure a network drive

1. Share *<drive>*:\Program Files\Common Files\Research In Motion with read-only permissions.
2. Verify that the computers of BlackBerry® device users in your organization can access the network drive.
3. To decrease bandwidth over your organization's LAN, verify that the network drive is in close proximity to users.

Save the BlackBerry Device Software installation files to the network drive

Before you begin: Obtain the BlackBerry® Device Software installation media from your service provider.

1. On the network drive, in the installation directory, create a folder that is named **Device**.
2. Save the required BlackBerry Device Software files to the folder.

Verify the version of the application loader tool

Perform this task to verify that the application loader tool can support the version of the BlackBerry® Device Software that you plan to install.

1. On the network drive, navigate to *<drive>*:\Program Files\Common Files\Research In Motion\AppLoader.
2. Right-click **loader.exe**.
3. Click **Properties**.
4. On the **Version** tab, verify that **loader.exe** is Version 4.1 or later.
   If the version number for **loader.exe** is earlier than Version 4.1, visit www.blackberry.com/support/downloads to download BlackBerry® Desktop Software Version 4.1 or later.

Pushing the BlackBerry Desktop Software or BlackBerry Device Manager installation files to users' computers

If BlackBerry® device users do not have the BlackBerry® Desktop Software installed on their computers, you can send the installation files for the BlackBerry Desktop Software or the BlackBerry® Device Manager to their computers.

You can distribute the installation files in one of the following ways:

- push the .msi file for the BlackBerry Device Manager to users' computers
- configure and push the BlackBerry Desktop Software installation file to users' computers, which installs the software and settings on users' computers automatically

If users require the S/MIME Support Package for BlackBerry® devices to synchronize certificates and private keys, send them the BlackBerry Desktop Software.

Push the BlackBerry Device Manager installation file to users' computers

You can push the BlackBerry® Device Manager to users' computers so that they can perform tasks such as charging their BlackBerry devices, synchronizing organizer items through the BlackBerry Router, and upgrading the BlackBerry® Device Software at their computers.

Note: When you push the BlackBerry Device Manager installation file, the installation process automatically removes the BlackBerry Desktop Manager from users' computers.

1. Download the installation file for the BlackBerry Device Manager from www.blackberry.com/support/downloads.
2. Copy the installation file that you downloaded to the shared network drive.
3. Send users an email message that includes the following information:
   - location of the installation file on the network drive
   - instructions to double-click blackberry device manager v4.1.msi

Push the BlackBerry Desktop Software installation file to users' computers

You can push the BlackBerry® Desktop Software to users' computers so that they can synchronize organizer data items and manage message forwarding at their computers.

> Send users an email message that includes the location of the installation file on the network drive and specifies one of the following installation types:
   - For the BlackBerry® Desktop Manager: *<shared network drive>*\setup.exe /s
   - For the BlackBerry Desktop Manager and the BlackBerry Certificate Synchronization Manager: *<shared network drive>*\setup.exe /s /v "INSTALLLEVEL=125"

   The software installs automatically.

Synchronizing wireless data automatically

When you upgrade the BlackBerry® Enterprise Server, the BlackBerry Synchronization Service sends service books to the BlackBerry devices that can synchronize data over the wireless network. For more information about which BlackBerry® Device Software versions cause wireless data synchronization to occur automatically, visit www.blackberry.com/support to read article KB04295.

Create the BlackBerry Device Software upgrade instructions for BlackBerry device users

Perform this task so that your users can upgrade the BlackBerry® Device Software.

1. Create an email message that includes the location of the application loader tool and specifies the following loading commands based on the type of connection that the BlackBerry device uses:
   - USB: *<shared computer name>*\Research In Motion\Apploader\loader.exe /defaultUSB /forceload
   - Serial: *<shared computer name>*\Research In Motion\Apploader\loader.exe

2. Consider providing the following instructions in the email message:
   - Connect your BlackBerry device to your computer.
   - Do not disconnect your BlackBerry device from your computer until the upgrade process completes.
   - If prompted, type your BlackBerry device password. Click **Next**.
   - If your BlackBerry device uses a serial connection, complete the instructions on the screen.
   - If prompted, select the **Provision the device during the loading process** option, and select the messaging server on which your user account is located.

Confirming that the BlackBerry Device Software upgrade process completed successfully

Verify that the upgrade from BlackBerry Device Software Version 4.0 or later completed successfully

1. In the BlackBerry® Manager, in the left pane, click a BlackBerry® Enterprise Server.
2. In the **Users** list, click a user.
3. In the lower pane, verify the BlackBerry® Device Software version.

   When you upgrade the BlackBerry Device Software, the version of the BlackBerry Device Software on the BlackBerry device does not update immediately in the BlackBerry Manager. You might have to wait for a short period of time while the BlackBerry Configuration Database synchronizes the version of the BlackBerry Device Software that displays in the BlackBerry Manager with the version of the BlackBerry Device Software that is installed on the BlackBerry device.

Verify that the upgrade from BlackBerry Device Software Version 3.6 completed successfully

> Instruct users to perform the following actions:
   - On the BlackBerry® device, in the device options, click **About**.
   - Confirm the version.

Upgrading the BlackBerry Device Software at a central computer

If you want to upgrade the BlackBerry® Device Software for users, or if you want users to upgrade their BlackBerry devices at a central location, you can upgrade the BlackBerry Device Software at a central computer.

Advantages	Disadvantages
• You can monitor the software upgrade process at the central computer.	• You cannot make users upgrade the BlackBerry Device Software.

Advantages	Disadvantages
• You can use software configurations to help control the software upgrades. • You can upgrade multiple BlackBerry devices at the same time. • You can upgrade BlackBerry devices for users who do not have the BlackBerry® Desktop Manager installed on their computers. • You can share a single software location among multiple central computers.	

Configure a network drive

1. Share *<drive>*:\Program Files\Common Files\Research In Motion with read-only permissions.
2. Verify that the computers of BlackBerry® device users in your organization can access the network drive.
3. To decrease bandwidth over your organization's LAN, verify that the network drive is in close proximity to users.

Save the BlackBerry Device Software installation files to the network drive

Before you begin: Obtain the BlackBerry® Device Software installation media from your service provider.

1. On the network drive, in the installation directory, create a folder that is named **Device**.
2. Save the required BlackBerry Device Software files to the folder.

Create a software configuration for the BlackBerry Device Software

Perform this task to help control the software upgrade process for each BlackBerry® device at a central computer.

1. In the BlackBerry Manager, in the left pane, click **BlackBerry Domain**.
2. On the **Software Configurations** tab, click **Add New Configuration**.
3. In the **Configuration Name** field, type a name for the software configuration.
4. In the **Device Software Location** field, click the **Change** button.
5. Navigate to the network location where you installed the BlackBerry® Device Software.
6. In the **Application Name** list, select the check box for the BlackBerry device series that you want to upgrade the BlackBerry Device Software for.
7. Expand the application tree.
8. Select the check boxes for additional components or applications that you want to install.

9. Click **OK**.

Assign the software configuration to a user account

If you add the BlackBerry® Device Software to a software configuration and then assign the software configuration to a user acount, you can monitor when the upgrade process occurs.

1. In the BlackBerry Manager, in the left pane, click a BlackBerry® Enterprise Server.
2. In the **Users** list, click the user account that you want to assign the software configuration to.
3. In the lower pane, click **Device Management**.
4. Click **Assign Software Configuration**.
5. Click a software configuration.
6. Click **OK**.

Upgrade the BlackBerry Device Software at a central computer

Before you begin:

- Verify that the central computer can access the network drive.
- To decrease bandwidth over your organization's LAN, verify that the network drive is in close proximity to the central computer.
- Verify that BlackBerry® Manager is installed on the central computer.

1. Connect the BlackBerry device to the central computer that hosts the BlackBerry Manager.
2. In the BlackBerry Manager, in the left pane, click **Ports**.
3. On the **Ports** tab, click the BlackBerry device whose BlackBerry® Device Software you want to upgrade.
4. Perform one of the following actions:
   - To upgrade the BlackBerry Device Software automatically, click **Load Handheld**.
   - To upgrade the BlackBerry Device Software using the application loader tool, click **Load Handheld (Interactive)**.
5. Click a software configuration.
6. Click **OK**.
7. If you are using the application loader tool, complete the instructions on the screen.

Verify that the BlackBerry Device Software upgrade at a central computer completed successfully

1. In the BlackBerry® Manager, in the left pane, click a BlackBerry® Enterprise Server.
2. In the **Users** list, click a user.
3. In the lower pane, check for one of the following status messages:

- **Upgrade Required**: the BlackBerry device has not yet been upgraded to the BlackBerry® Device Software specified in the assigned software configuration
- **Up to date**: the BlackBerry device has been upgraded to the BlackBerry Device Software specified in the software configuration

When you upgrade the BlackBerry Device Software, the version of the BlackBerry Device Software on the BlackBerry device does not update immediately in the BlackBerry Manager. You might have to wait for a short period of time while the BlackBerry Configuration Database synchronizes the version of the BlackBerry Device Software that displays in the BlackBerry Manager with the version of the BlackBerry Device Software that is installed on the BlackBerry device.

Pushing the BlackBerry Device Software and the BlackBerry Desktop Software to users' computers

You can use third-party applications to create a single upgrade file that contains the BlackBerry® Desktop Software and the BlackBerry® Device Software, and send the upgrade file to the computers of BlackBerry device users.

The application loader tool on the computers then upgrades the BlackBerry Device Software on the BlackBerry device.

Advantages	Disadvantages
• You can install the BlackBerry Device Software and the BlackBerry Desktop Software on computers automatically. • You can set an IT policy to make users upgrade the BlackBerry Device Software.	• You must distribute large upgrade packages over your organization's LAN.

This upgrade process applies when you upgrade from BlackBerry Device Software Version 3.5 or earlier.

Configure a network drive

1. Share *<drive>*:\Program Files\Common Files\Research In Motion with read-only permissions.
2. Verify that the computers of BlackBerry® device users in your organization can access the network drive.
3. To decrease bandwidth over your organization's LAN, verify that the network drive is in close proximity to users.

Save the BlackBerry Device Software installation files to the network drive

Before you begin: Obtain the BlackBerry® Device Software installation media from your service provider.

1. On the network drive, in the installation directory, create a folder that is named **Device**.

2. Save the required BlackBerry Device Software files to the folder.

Save the BlackBerry Desktop Software installation files to the network drive

1. Download the BlackBerry® Desktop Software installation file from www.blackberry.com/support/downloads.
2. Save the installation file that you downloaded to the shared network drive.
3. If necessary, extract the installation files from the **.exe** file to the network drive.
4. On the network drive, open **setup.ini**.
5. At the bottom of **setup.ini**, type **[INSTALL_OPTIONS]**.
6. To add the installation settings, use **install.txt**, which is included with the BlackBerry Desktop Software installation files.
7. Save **setup.ini**.

Synchronizing wireless data automatically

When you upgrade the BlackBerry® Enterprise Server, the BlackBerry Synchronization Service sends service books to the BlackBerry devices that can synchronize data over the wireless network. For more information about which BlackBerry® Device Software versions cause wireless data synchronization to occur automatically, visit www.blackberry.com/support to read article KB04295.

Send the installation files for the BlackBerry Desktop Software and the BlackBerry Device Software to users using a third-party application

Perform this task so that you can upgrade the BlackBerry® Desktop Software and BlackBerry® Desktop Manager by pushing the software to user computers using a third-party application.

1. To record the customized settings in the BlackBerry Desktop Software installation files so that you can create a custom software package, at a command prompt, type one of the following commands:
   - For BlackBerry Desktop Manager users, type **\\<*shared computer name*>\setup.exe /s**
   - For BlackBerry Desktop Manager users and BlackBerry Certificate Synchronization Manager users, type **\\<*shared computer name*>\setup.exe /s /v "INSTALLLEVEL=125"**
2. Package the customized BlackBerry Desktop Software and the BlackBerry® Device Software installation files using a third-party application for software packaging.
3. Send the installation files using a third-party application for software distribution.

After you finish: If you want to make sure that users upgrade the BlackBerry Device Software, set the Force Load Count IT policy rule and the Force Load Message IT policy rule. For more information, see the *BlackBerry Enterprise Server Policy Reference Guide*.

Confirming that the BlackBerry Device Software upgrade process completed successfully

Verify that the upgrade from BlackBerry Device Software Version 4.0 or later completed successfully

1. In the BlackBerry® Manager, in the left pane, click a BlackBerry® Enterprise Server.
2. In the **Users** list, click a user.
3. In the lower pane, verify the BlackBerry® Device Software version.

   When you upgrade the BlackBerry Device Software, the version of the BlackBerry Device Software on the BlackBerry device does not update immediately in the BlackBerry Manager. You might have to wait for a short period of time while the BlackBerry Configuration Database synchronizes the version of the BlackBerry Device Software that displays in the BlackBerry Manager with the version of the BlackBerry Device Software that is installed on the BlackBerry device.

Verify that the upgrade from BlackBerry Device Software Version 3.6 completed successfully

> Instruct users to perform the following actions:
  - On the BlackBerry® device, in the device options, click **About**.
  - Confirm the version.

Troubleshooting the BlackBerry Device Software upgrade process 10

When users click the link to the application loader tool in the upgrade instructions, the upgrade process does not start

Possible cause

The application loader might not be shared.

Possible solution

1. Connect a BlackBerry® device to a computer on which the BlackBerry Manager is installed.
2. At the command prompt, type **\\<*shared network drive*>\Research In Motion\Apploader\loader.exe**
3. If the application loader tool starts, the tool is shared successfully.

Glossary 11

AJAX
Asynchronous JavaScript® and XML

BlackBerry Domain
A BlackBerry Domain consists of the BlackBerry Configuration Database with its users and any BlackBerry® Enterprise Server instances that connect to it.

BlackBerry MDS
BlackBerry® Mobile Data System

CAL
A client access license (CAL) limits how many users you can add to the BlackBerry® Enterprise Server.

CDO
Collaboration Data Object

DMZ
A demilitarized zone (DMZ) is a neutral subnetwork outside of an organization's firewall. It exists between the trusted LAN of the organization and the untrusted external wireless network and public Internet.

DNS
Domain Name System

HTTPS
Hypertext Transfer Protocol over Secure Sockets Layer

IP
Internet Protocol

ISAPI
Internet Server Application Programming Interface

LAN
local area network

MAPI
Messaging Application Programming Interface

MDAC
Microsoft® Data Access Components

messaging server
A messaging server sends and processes messages and provides collaboration services, such as updating and communicating calendar and address book information.

BlackBerry Mobile Data Service
After you upgrade to BlackBerry® Enterprise Server Version 4.1 or later, the BlackBerry® Mobile Data Service name changes to the BlackBerry MDS Connection Service.

MSDE
Microsoft® SQL Server® Desktop Engine

MSMQ
Microsoft® Message Queuing

MTLS
Mutual Transport Layer Security

ODBC
Open Database Connectivity

S/MIME
Secure Multipurpose Internet Mail Extensions

SNMP
Simple Network Management Protocol

SQL
Structured Query Language

SRP
Server Routing Protocol

SSL
Secure Sockets Layer

TLS
Transport Layer Security

TCP/IP
Transmission Control Protocol/Internet Protocol (TCP/IP) is a set of communication protocols that is used to transmit data over networks, such as the Internet.

USB
Universal Serial Bus

XML
Extensible Markup Language

Legal notice 12

©2008 Research In Motion Limited. All rights reserved. BlackBerry®, RIM®, Research In Motion®, SureType® and related trademarks, names, and logos are the property of Research In Motion Limited and are registered and/or used in the U.S. and countries around the world.

IBM, Lotus, and Sametime are trademarks of International Business Machines Corporation. Microsoft, Active Directory, Internet Explorer, SQL Server, Visual Studio, Windows, Windows Media, and Windows Server are trademarks of Microsoft Corporation. Novell and GroupWise are trademarks of Novell, Inc. RSA is a trademark of RSA Security. Java and JavaScript are trademarks of Sun Microsystems, Inc. VMware is a trademark of VMware, Inc. Wi-Fi is a trademark of the Wi-Fi Alliance. All other trademarks are the property of their respective owners.

The BlackBerry smartphone and other devices and/or associated software are protected by copyright, international treaties, and various patents, including one or more of the following U.S. patents: 6,278,442; 6,271,605; 6,219,694; 6,075,470; 6,073,318; D445,428; D433,460; D416,256. Other patents are registered or pending in the U.S. and in various countries around the world. Visit www.rim.com/patents for a list of RIM (as hereinafter defined) patents.

This documentation including all documentation incorporated by reference herein such as documentation provided or made available at www.blackberry.com/go/docs is provided or made accessible "AS IS" and "AS AVAILABLE" and without condition, endorsement, guarantee, representation, or warranty of any kind by Research In Motion Limited and its affiliated companies ("RIM") and RIM assumes no responsibility for any typographical, technical, or other inaccuracies, errors, or omissions in this documentation. In order to protect RIM proprietary and confidential information and/or trade secrets, this documentation may describe some aspects of RIM technology in generalized terms. RIM reserves the right to periodically change information that is contained in this documentation; however, RIM makes no commitment to provide any such changes, updates, enhancements, or other additions to this documentation to you in a timely manner or at all.

This documentation might contain references to third-party sources of information, hardware or software, products or services including components and content such as content protected by copyright and/or third-party web sites (collectively the "Third Party Products and Services"). RIM does not control, and is not responsible for, any Third Party Products and Services including, without limitation the content, accuracy, copyright compliance, compatibility, performance, trustworthiness, legality, decency, links, or any other aspect of Third Party Products and Services. The inclusion of a reference to Third Party Products and Services in this documentation does not imply endorsement by RIM of the Third Party Products and Services or the third party in any way.

EXCEPT TO THE EXTENT SPECIFICALLY PROHIBITED BY APPLICABLE LAW IN YOUR JURISDICTION, ALL CONDITIONS, ENDORSEMENTS, GUARANTEES, REPRESENTATIONS, OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY CONDITIONS, ENDORSEMENTS, GUARANTEES, REPRESENTATIONS OR WARRANTIES OF DURABILITY, FITNESS FOR A PARTICULAR PURPOSE OR USE, MERCHANTABILITY, MERCHANTABLE QUALITY, NON-INFRINGEMENT, SATISFACTORY QUALITY, OR TITLE, OR ARISING FROM A STATUTE OR CUSTOM OR A COURSE OF DEALING OR USAGE OF TRADE, OR RELATED TO THE DOCUMENTATION OR ITS USE, OR PERFORMANCE OR NON-PERFORMANCE OF ANY SOFTWARE, HARDWARE, SERVICE, OR ANY THIRD PARTY PRODUCTS AND SERVICES REFERENCED HEREIN, ARE HEREBY EXCLUDED. YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY BY STATE OR PROVINCE. SOME JURISDICTIONS MAY NOT ALLOW THE EXCLUSION OR LIMITATION OF IMPLIED WARRANTIES AND CONDITIONS. TO THE EXTENT PERMITTED BY LAW, ANY IMPLIED WARRANTIES OR CONDITIONS RELATING TO THE

DOCUMENTATION TO THE EXTENT THEY CANNOT BE EXCLUDED AS SET OUT ABOVE, BUT CAN BE LIMITED, ARE HEREBY LIMITED TO NINETY (90) DAYS FROM THE DATE YOU FIRST ACQUIRED THE DOCUMENTATION OR THE ITEM THAT IS THE SUBJECT OF THE CLAIM.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW IN YOUR JURISDICTION, IN NO EVENT SHALL RIM BE LIABLE FOR ANY TYPE OF DAMAGES RELATED TO THIS DOCUMENTATION OR ITS USE, OR PERFORMANCE OR NON-PERFORMANCE OF ANY SOFTWARE, HARDWARE, SERVICE, OR ANY THIRD PARTY PRODUCTS AND SERVICES REFERENCED HEREIN INCLUDING WITHOUT LIMITATION ANY OF THE FOLLOWING DAMAGES: DIRECT, CONSEQUENTIAL, EXEMPLARY, INCIDENTAL, INDIRECT, SPECIAL, PUNITIVE, OR AGGRAVATED DAMAGES, DAMAGES FOR LOSS OF PROFITS OR REVENUES, FAILURE TO REALIZE ANY EXPECTED SAVINGS, BUSINESS INTERRUPTION, LOSS OF BUSINESS INFORMATION, LOSS OF BUSINESS OPPORTUNITY, OR CORRUPTION OR LOSS OF DATA, FAILURES TO TRANSMIT OR RECEIVE ANY DATA, PROBLEMS ASSOCIATED WITH ANY APPLICATIONS USED IN CONJUNCTION WITH RIM PRODUCTS OR SERVICES, DOWNTIME COSTS, LOSS OF THE USE OF RIM PRODUCTS OR SERVICES OR ANY PORTION THEREOF OR OF ANY AIRTIME SERVICES, COST OF SUBSTITUTE GOODS, COSTS OF COVER, FACILITIES OR SERVICES, COST OF CAPITAL, OR OTHER SIMILAR PECUNIARY LOSSES, WHETHER OR NOT SUCH DAMAGES WERE FORESEEN OR UNFORESEEN, AND EVEN IF RIM HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW IN YOUR JURISDICTION, RIM SHALL HAVE NO OTHER OBLIGATION, DUTY, OR LIABILITY WHATSOEVER IN CONTRACT, TORT, OR OTHERWISE TO YOU INCLUDING ANY LIABILITY FOR NEGLIGENCE OR STRICT LIABILITY.

THE LIMITATIONS, EXCLUSIONS, AND DISCLAIMERS HEREIN SHALL APPLY: (A) IRRESPECTIVE OF THE NATURE OF THE CAUSE OF ACTION, DEMAND, OR ACTION BY YOU INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR ANY OTHER LEGAL THEORY AND SHALL SURVIVE A FUNDAMENTAL BREACH OR BREACHES OR THE FAILURE OF THE ESSENTIAL PURPOSE OF THIS AGREEMENT OR OF ANY REMEDY CONTAINED HEREIN; AND (B) TO RIM AND ITS AFFILIATED COMPANIES, THEIR SUCCESSORS, ASSIGNS, AGENTS, SUPPLIERS (INCLUDING AIRTIME SERVICE PROVIDERS), AUTHORIZED RIM DISTRIBUTORS (ALSO INCLUDING AIRTIME SERVICE PROVIDERS) AND THEIR RESPECTIVE DIRECTORS, EMPLOYEES, AND INDEPENDENT CONTRACTORS.

IN ADDITION TO THE LIMITATIONS AND EXCLUSIONS SET OUT ABOVE, IN NO EVENT SHALL ANY DIRECTOR, EMPLOYEE, AGENT, DISTRIBUTOR, SUPPLIER, INDEPENDENT CONTRACTOR OF RIM OR ANY AFFILIATES OF RIM HAVE ANY LIABILITY ARISING FROM OR RELATED TO THE DOCUMENTATION.

Prior to subscribing for, installing, or using any Third Party Products and Services, it is your responsibility to ensure that your airtime service provider has agreed to support all of their features. Installation or use of Third Party Products and Services with RIM's products and services may require one or more patent, trademark, copyright, or other licenses in order to avoid infringement or violation of third party rights. You are solely responsible for determining whether to use Third Party Products and Services and if any third party licenses are required to do so. If required you are responsible for acquiring them. You should not install or use Third Party Products and Services until all necessary licenses have been acquired. Any Third Party Products and Services that are provided with RIM's products and services are provided as a convenience to you and are provided "AS IS" with no express or implied conditions, endorsements, guarantees, representations, or warranties of any kind by RIM and RIM assumes no liability whatsoever, in relation thereto. Your use of Third Party Products and Services shall be governed by and subject to you agreeing to the terms of separate licenses and other agreements applicable thereto with third parties, except to the extent expressly covered by a license or other agreement with RIM.

The terms of use of any RIM product or service are set out in a separate license or other agreement with RIM applicable thereto. NOTHING IN THIS DOCUMENTATION IS INTENDED TO SUPERSEDE ANY EXPRESS WRITTEN AGREEMENTS OR WARRANTIES PROVIDED BY RIM FOR PORTIONS OF ANY RIM PRODUCT OR SERVICE OTHER THAN THIS DOCUMENTATION.

Certain features outlined in this documentation require a minimum version of BlackBerry® Enterprise Server Software, BlackBerry® Desktop Software, and/or BlackBerry® Device Software and may require additional development or Third Party Products and Services for access to corporate applications.

This product includes software developed by the Apache Software Foundation (www.apache.org/) and/or licensed pursuant to Apache License, Version 2.0 (www.apache.org/licenses/). For more information, see the NOTICE.txt file included with the software. Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

Research In Motion Limited
295 Phillip Street
Waterloo, ON N2L 3W8
Canada

Research In Motion UK Limited
200 Bath Road
Slough, Berkshire SL1 3XE
United Kingdom

Published in Canada